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REMARKS

Claims 35 and 38-52 are pending in the application.

The Examiner's allowance of Claims 35, 38-41 and 50-52 is acknowledged with appreciation. The Examiner's indication that Claims 42 and 45-49 would be allowable if rewritten to overcome the rejections under 35 U.S.C. § 112, second paragraph, is also acknowledged.

By the present Amendment, Claim 38 has been amended to depend from Claim 35. Independent Claim 43 has been amended to more clearly recite that the automatic door latch includes a dead bolt movable to an extended position in which the dead bolt automatically locks against retraction when end pressure is applied to the dead bolt. This amendment explicitly recites a feature which was inherently present in Claim 43 as filed, namely, that the dead bolt, when in the extended position, automatically locks such that the dead bolt does not retract upon the application of end pressure. Antecedent basis for the "automatically locks against retraction" language is provided in the specification, for example, at page 7, lines 6-28. No issue of new matter is presented. Furthermore, since the "automatically locks against retraction" feature was inherently present in Claim 43 as originally filed, it is submitted that the present amendment does not represent a feature which must be further searched by the Examiner. Accordingly, entry of this amendment is respectfully requested.

Claims 42-49 stand rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicant regards as the invention. The Examiner states that Applicant has claimed a dead bolt biased by a spring, and questions whether Applicant is claiming a latch bolt or a dead bolt, since the definition of a dead bolt, according to the Examiner, is a bolt moved by a knob or key without the action of a spring. In support of this definition, the Examiner cites the following *Encyclopedia Britannica* definition of "dead bolt":

> A lock bolt that is moved by turning the knob or key without action of a spring.

Applicant respectfully submits that the *Encyclopedia Britannica* definition of a "dead bolt" includes only one specific type of dead bolt, and does not correspond to the broader definition of "dead bolt" as understood by those skilled in the art. Enclosed herewith is a copy of relevant pages from the *American National Standard for Bored and*

Preassembled Locks and Latches; Builders Hardware Manufacturers Association, which includes definitions of "dead bolt" and "latch bolt". The enclosed *ANSI/BHMA* publication sets forth standards followed by those skilled in the door latch art. According to the *ANSI/BHMA* definition, a "dead bolt" is:

> A lock component having an end which protrudes from, or is withdrawn into, the lock front by action of the lock mechanism. When the door is closed and the dead bolt thrown, it extends into a hole provided in the strike, locks the door, and will not retract with end pressure.

The definition does not require any spring is included

This standard definition lacks any prohibition of moving the dead bolt with a spring. Instead, the definition states that the dead bolt is actuated by "action of the lock mechanism". According to the *ANSI/BHMA* standard definition, a characteristic of the dead bolt is that it will not retract with end pressure when the dead bolt is thrown.

In contrast, the *ANSI/BHMA* standard definition of "latch bolt" is:

> A lock component having a beveled end which projects from the lock front in an extended position but is forced back into the lock case by end pressure or drawn back by action of the lock mechanism. When the door is closed, the latch bolt projects into a hole provided in the strike, and holds the door in a closed position.

This standard definition provides that the lock component of a latch bolt is forced back into the lock case by end pressure or drawn back by action of the lock mechanism. Thus, according to the *ANSI/BHMA* standard definitions, dead bolts and latch bolts are distinguishable by the fact that dead bolts do not retract with end pressure, while latch bolts do retract by end pressure.

It is respectfully submitted that the *Encyclopedia Britannica* definition relied upon by the Examiner describes one species of dead bolts, but does not reflect the broader generic definition of a dead bolt as understood by one skilled in the art and defined in the *ANSI/BHMA* standards. Accordingly, it is submitted that Applicant's use of the term "dead bolt" in the claims fully meets the requirements of 35 U.S.C. § 112, second paragraph.

Claims 43 and 44 stand rejected under 35 U.S.C. § 102(b) or 103(a) over U.S. Patent No. 1,681,147 to Dexter. According to the Office Action, Dexter '147 discloses a first latch (6) movable to an extended position, a partially retracted position (position between extended and retracted position) and a fully retracted position; a first spring (Figure

1, inside element 3); restraint means including a second latch (16) for manually securing the first latch in the fully retracted position (page 2, lines 1-11). Applicant respectfully traverses this rejection.

Dexter '147 discloses a locking rosette which may be applied to a standard door latch. The locking rosette is operable to lock an operating bar on which the doorknob is mounted against movement (see page 1, lines 2-6). As shown in Figs. 1-4 of Dexter '147, a locking bar 16 is horizontally slidable from a position shown in Figs. 2 and 3 in which the locking bar 16 prevents rotation of the doorknob operating bar 7, to a position which allows the doorknob operating bar 7 to rotate (see page 2, lines 2-8). Dexter '147 lacks any teaching or suggestion that the bolt 6 is a dead bolt, as recited in Claim 43. Specifically, the reference does not teach or suggest that when the bolt 6 is in the extended position (as shown in Fig. 1), it will not retract with end pressure. In fact, if the Dexter '147 mechanism includes a spring inside the cylinder 3 which biases the bolt 6, as suggested by the Examiner, it appears that the bolt 6 would actually be retracted upon the application of end pressure. Furthermore, the reference lacks any teaching or suggestion of a dead bolt that automatically locks against retraction when end pressure is applied to the dead bolt when it is in an extended position, as recited in Claim 43. Since the Dexter '147 reference does not teach or suggest a dead bolt and does not teach or suggest any type of bolt that is movable to an extended position in which the bolt automatically locks against retraction when end pressure is applied, it is submitted that independent Claim 43 is patentable thereover.

Claim 47 stands further rejected under 35 U.S.C. § 102(b) over U.S. Patent No. 5,009,456 to Eck. According to the Office Action, Eck '456 discloses a first latch (15) movable to an extended position (Figure 2), a partially retracted position (position between extended and retracted position) and a fully retracted position (Figure 3); a first spring (17); and restraint means including a second latch (25) for manually securing the first latch in the fully retracted position. Applicant respectfully traverses this rejection.

Eck '456 discloses a door lock apparatus including a latch bolt 15. As shown in Figs. 2 and 3, and discussed at column 2, lines 17-24, the latch bolt 15 of Eck '456 is biased into its extended position by a spring 17. In the extended position, the latch bolt 15 does not automatically lock against retraction when end pressure is applied. Instead, the latch bolt 15 may be retracted with end pressure against the force of the spring 17. Therefore, Eck '456 does not teach or suggest a dead bolt movable to an extended position

in which the dead bolt automatically locks against retraction when end pressure is applied, as recited in independent Claim 43.

It is therefore submitted that independent Claim 43, and the claims that depend therefrom, are patentable over the prior art of record.

In view of the foregoing amendments and remarks, it is submitted that the presently claimed invention meets the requirements of 35 U.S.C. § 112, and Claims 35 and 38-52 are patentable over the prior art of record. Accordingly, an early Notice of Allowance of this application is respectfully requested.

In the event that any outstanding matters remain in connection with this application, the Examiner is invited to telephone the undersigned at (412) 263-4340 to discuss such matters.

Respectfully submitted,

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Marked-up Version of Claims

38. (Amended) The automatic door latch restraint assembly of Claim [37] 35, further comprising a manually operable button connected to the second latch for inserting the second latch into the keeper.

43. (Amended) An automatic door latch restraint assembly comprising:

an automatic door latch including a dead bolt movable to an extended position in which the dead bolt automatically locks against retraction when end pressure is applied to the dead bolt, a partially retracted position and a fully retracted position, and a first spring biasing the dead bolt toward the extended position; and

restraint means including a second latch for manually securing the dead bolt in the fully retracted position.

Proposed ANSI/BHMA A156.2-1996
Revision of:
ANSI/BHMA A156.2-1989

AMERICAN NATIONAL STANDARD

FOR

BORED AND PREASSEMBLED LOCKS AND LATCHES

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APPROVED DECEMBER 3, 1996
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AMERICAN NATIONAL STANDARD

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1. SCOPE

1.1 This Standard establishes requirements for bored and preassembled locks and latches and includes performance tests, strength tests, operational tests, material evaluation tests, finish tests, and dimensional criteria.

1.2 Tests described in this Standard are performed under laboratory conditions. In actual usage, results vary because of installation, maintenance and environmental conditions.

1.3 When locks and latches are used in fire door assemblies, they shall have been tested and listed for use in fire doors by a nationally recognized independent testing laboratory and shall be under an in-plant follow-up inspection service.

1.4 See ANSI/BHMA A156.13 or A156.12 respectively for series 1000 mortise locks and latches or series 5000 interconnected locks and latches.

2. DEFINITIONS

2.1 **Backset.** The distance from the edge of the door to the centerline of the cylinder at the centerline of the door thickness.

2.2 **Bolts**

2.2.1 **Dead Bolt.** A lock component having an end which protrudes from, or is withdrawn into, the lock front by action of the lock mechanism. When the door is closed and the dead bolt thrown, it extends into a hole provided in the strike, locks the door, and will not retract with end pressure.

2.2.2 **Latch Bolt.** A lock component having a beveled end which projects from the lock front in an extended position but is forced back into the lock case by end pressure or drawn back by action of the lock mechanism. When the door is closed, the latch bolt projects into a hole provided in the strike, and holds the door in a closed position.

2.2.3 **Deadlocking Latch Bolt.** A spring actuated latch bolt with a beveled end and incorporating a plunger which, when depressed, automatically locks the projected latch bolt against return by end pressure. Also called dead latch.

2.3 **Cylinder.** The subassembly of a lock containing a plug with keyway and a body with tumbler mechanism.

2.3.1 **Cylinder Body.** The portion of a cylinder that surrounds the plug and contains the tumbler mechanism.

2.3.2 **Cylinder Plug.** A component of the cylinder within the body which is actuated when the correct key is inserted.

2.3.3 **Interchangeable Core.** A cylinder that is removable from the lock with a designated key without disassembly of the lock.

2.4 **Cylinder Housing.** The portion of a lock that surrounds and retains the cylinder body. It is a lever or knob, part of a lock case or other anchoring means.

2.5 **Locks**

2.5.1 **Preassembled Lock Series 2000.** A key in the lever or knob type lock fitting into a notched cutout in a door.

2.5.2 **Bored Lock Series 4000.** A key in the lever or knob type lock installed in round bored openings in the edge and face of a door.

2.6 **Lock Front.** A plate fastened to the edge of a door through which the bolts pass.

2.7 **Strike.** A plate fastened to the door frame into which the bolts project.

2.8 **Strike Box.** A housing used in back of a strike to enclose the bolt or bolt openings.